

REMARKS/ARGUMENTS

Favorable reconsideration of this application in light of the following discussion is respectfully requested.

Claims 1-48 are presently active in this case. The present Amendment amends Claims 1-6, 9-11, 13-16, 21-26, 29-31, and 33-36 and adds Claims 41-48.

In the outstanding Office Action, Claims 1-40 were rejected under 35 U.S.C. § 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements. Claims 1-40 were rejected under 35 U.S.C. § 102(b) as being anticipated by Korelitz et al. (U.S. Patent No. 3,867,616). Claims 1-40 were rejected under 35 U.S.C. § 102(b) as being anticipated by Higuchi et al. (U.S. Patent No. 5,945,995).

In response to the rejection under 35 U.S.C. § 112, second paragraph, Claims 1 and 21 are amended to correct the noted informalities. Specifically, Claims 1 and 21 now recite “said configuration tool including a processor connected to a database and a drawing module,” and “said means for configuring includes said means for processing and said means for processing are connected to said means for storing and said means for drawing,” respectively, thus specifying relationships between the recited elements. In view of amended Claims 1 and 21, it is believed that all pending claims are definite and complete and no further rejection on that basis is anticipated. If, however, the Examiner disagrees, the Examiner is invited to telephone the undersigned who will be happy to work with the Examiner in a joint effort to derive mutually acceptable language.

Briefly recapitulating, Applicant's invention, as recited in Claim 1, relates to a data processing system defining a spatial arrangement of structural components relative to each other within an installation space, including: an input configured to input general parameters of a selected installation space into a configuration tool, the configuration tool including a processor connected to a database and a drawing module, wherein: the database is configured

to store first data defining a space-specific geometry of the selected installation space, to load and display the first data in said drawing module, and to store second data respectively defining, geometrically, structural components that are to be arranged in the selected installation space; and the processor is configured to provide the second data together with the first data into the drawing module, to provide a rule set defining at least customer-specific requirements of a customer for whom the structural components are to be arranged in the installation space, and to process the first data and the second data together according to the rule set in said configuration tool so as to automatically define a spatial arrangement of the structural components relative to each other within the installation space.

In response to the rejection of Claims 1-40 under 35 U.S.C. § 102(b) based on the Korelitz et al. patent, Applicant respectfully requests reconsideration of the rejection and traverses the rejection as discussed next.

The Korelitz et al. patent discloses an automated designing system including steps of orienting mechanical units into a plot plan and assembling interconnecting point orientation measurement data and specification data of units to be interconnected in ordinary draftsman's terms. However, the Korelitz et al. patent fails to teach "an input configured to input general parameters of a *selected installation space*" and a processor that *automatically* defines "a spatial arrangement of the structural components relative to each other within the installation space."

The Korelitz et al. patent teaches a system similar to a component of conventional systems discussed in paragraph 0005 of Applicant's specification (a "computer aided design (CAD) systems for preparing drawings") and does not actually teach automated design, but rather automated preparation of drawings in a designing context. Specifically, the Korelitz et al. patent requires "orienting data for origination and destination points."¹ The Korelitz et al.

¹ Korelitz et al., column 1, lines 14-15.

patent further states that “[t]o accommodate the normal practice of the draftsman, the computer is programmed *to accept the data in a form a skilled draftsman can usually provide it* and then convert such data to a form which the computer needs *to convert such plot plan* to a visibly complete drawing.”² Clearly, any designing stage occurs prior to anything taught by the Korelitz et al. patent since the draftsman knows precisely what needs to be made, i.e., he can prepare a “plot plan,” which the computer can then use to prepare the drawing. The claimed invention also has the ability to automatically prepare drawings, but that is only one of its facets.

Therefore, Applicant respectfully submits that the Korelitz et al. patent cannot teach “an input configured to input general parameters of a *selected installation space*” since it inputs the specific characteristics or the “plot plan,” and not “general parameters of a selected installation space,” which only fits in a designing context, not in the context of drawing a previously designed “plot plan.” Further, Applicant respectfully submits that the Korelitz et al. patent cannot teach a processor that *automatically* defines “a spatial arrangement of the structural components relative to each other within the installation space” since the processor in the Korelitz et al. patent, being supplied with a “plot plan” ready for drawing, does not automatically defines a spatial arrangement but merely directs a plotter to draw the previously defined spatial arrangement supplied as input by the draftsman. That is, the Korelitz et al. processor merely takes an input, the “plot plan,” and arranges for a drawing to be made for that given input wherein the spatial arrangement is *already* defined. This fundamental difference can further be appreciated in that the processor in the claimed invention can perform an optimization of “a configuration of said structural components relative to each other within said installation space with respect to at least one of a functional *position* of each of said structural components and a *quantity* of said structural components

² Korelitz et al., column 1, lines 45-50.

arranged in said installation space," as recited in Claims 2 and 22. Applicant respectfully submits that the position and quantity of the objects in Korelitz et al. are not subject to an optimization by the processor, since they are already known and specifically prescribed by the plot plan.

Therefore, the prior art fails to teach or suggest every feature recited in Applicant's independent claims, so that Claims 1-40 are patentably distinct over the prior art.

Accordingly, Applicant respectfully traverses, and requests reconsideration of, the rejection based on the Korelitz et al. patent.³

In response to the rejection of Claims 1-40 under 35 U.S.C. § 102(b) based on the Higuchi et al. patent, Applicant respectfully requests reconsideration of the rejection and traverses the rejection as discussed next.

The Higuchi et al. patent discloses a design supporting system for designing a mechanical part using a 2-dimensional drawing. However, the Korelitz et al. patent fails to teach "an input configured to input general parameters of a ***selected installation space***" and a processor that ***automatically*** defines "a spatial arrangement of the structural components relative to each other within the installation space."

Again, the Higuchi et al. patent teaches a system similar to a component of conventional systems discussed in paragraph 0005 of Applicant's specification and does not actually teach automated design, but rather automated preparation of a solid model in a designing context. In the Higuchi et al. patent, "a solid model definition drawing as shown in FIGS. 3A and 3B is input by means of the shape input section 12A based on drawing on the CAD and shape attribute information items as shown in FIG. 7 are input into respective

³ See MPEP 2131: "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference," (Citations omitted) (emphasis added). See also MPEP 2143.03: "All words in a claim must be considered in judging the patentability of that claim against the prior art."

planes by means of the shape attribute input section 12B”⁴ from which a solid model of the mechanical part can be made. Further, the Higuchi et al. patent is only concerned with one mechanical part and not with an arrangement of multiple objects in space. This is easily demonstrated by the manner in which Higuchi et al. proceeds to make the solid model. Specifically, in the Higuchi et al. patent, “a so-called **metal mold** is created and a part is created by filling resin or the like into the mold.”⁵ A mold undoubtably creates one mechanical part which is not defined with respect to anything but itself, and, in particular, not defined with respect to any surroundings or installation space.

Therefore, Applicant respectfully submits that the Higuchi et al. patent cannot teach “an input configured to input general parameters of a **selected installation space**” since it inputs the specific CAD drawing from which a corresponding solid model can be made using a mold, and not “general parameters of a selected installation space,” which only fits in a designing context, not in the context of molding a previously obtained design represented by a drawing. Further, Applicant respectfully submits that the Higuchi et al. patent cannot teach a processor that **automatically** defines “a spatial arrangement of the structural components relative to each other within the installation space” since the processor in the Higuchi et al. patent, being supplied with a suitable drawing, does not automatically defines a spatial arrangement but merely determines how to make a solid model corresponding to the drawing wherein the spatial arrangement is already defined.

Therefore, the prior art fails to teach or suggest every feature recited in Applicant's independent claims, so that Claims 1-40 are patentably distinct over the prior art. Accordingly, Applicant respectfully traverses, and requests reconsideration of, the rejection based on the Higuchi et al. patent.⁶

⁴ Higuchi et al., column 5, lines 34-39.

⁵ Higuchi et al., column 8, lines 53-54.

⁶ See MPEP 2131: “A claim is anticipated only if each and every element as set forth in the claim is found,

Applicant further notes, regarding Claims 2 and 22, that neither the Korelitz et al. nor the Higuchi et al. patents teaches a processor configured to *optimize* a configuration of said structural components relative to each other. In both cases, a product (plotter drawing or solid model) is produced from specifications (plot plan or CAD drawing) and while the processor controls the production, it merely produces the product according to the provided specifications and does not play a design role at all, much less perform an optimization.

Applicant further notes, regarding Claims 4 and 24, that the Higuchi et al. patent does not teach the production of at least one of drawings, parts lists, materials lists, video preliminary examinations, plotter plans, installation plans, production plans, or production contracts.

Applicant further notes, regarding Claims 6, 7, 26, and 27 that neither the Korelitz et al. nor the Higuchi et al. patents teaches an interface, a technical administrative system, and a production planning system.

Applicant further notes, regarding Claims 8-17 and 28-37 that neither the Korelitz et al. nor the Higuchi et al. patents teaches any of the features related to an aircraft or a cabin of an aircraft. In particular, neither reference teaches any of the limitations pertaining to a service channel and structural components associated thereto, cabin outfitting compartments, cabin dividers, baggage compartments serving as carriers for equipment and electrical interfaces.

Applicant respectfully submits that the above features are but a few of the claimed features not taught or suggested by the cited prior art, which prior art, in particular, is not at all concerned with an aircraft. Accordingly, should the rejections be maintained, Applicant respectfully requests that passages of the cited references be identified for every recited

either expressly or inherently described, in a single prior art reference," (Citations omitted) (emphasis added). See also MPEP 2143.03: "All words in a claim must be considered in judging the patentability of that claim against the prior art."

feature. This would be very helpful to, and much appreciated by, Applicant in pursuing prosecution of this application.

Further, in order to vary the scope of protection recited in the claims, new Claims 41-48 are added. New Claims 41-48 find non-limiting support in the disclosure as originally filed, for example in the original claims. Therefore, the changes to the claims are not believed to raise a question of new matter.⁷

Consequently, in view of the present amendment, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal Allowance. A Notice of Allowance for Claims 1-48 is earnestly solicited.

Should the Examiner deem that any further action is necessary to place this application in even better form for allowance, the Examiner is encouraged to contact Applicant's undersigned representative at the below listed telephone number.

Respectfully submitted,

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⁷ See MPEP 2163.06 stating that "information contained in any one of the specification, claims or drawings of the application as filed may be added to any other part of the application without introducing new matter."